

syphilitic struma, as it bears vitally upon the questions, who are most prone to receive infection, how the virus is propagated, and in what way to attempt to restrain the spread of venereal disease.

I shall not at this time and in this presence do more than thus indicate the very practical directions in which, following these suggestions, both sanitarians and therapeutists may successfully move. Permit me to say, however, that while I am writing, corroborative evidence of their importance has been furnished by Dr. Wm. Henry Porter in an article in the *N. Y. Medical Record*, summarized in the *St. Louis Medical and Surgical Journal* for April 1887. Dr. Porter discusses the "Étiological Significance of Syphilis as a Factor of Disease in connection with Pulmonary Lesions," and among his conclusions are these: The pulmonary lesions attributable to syphilis are quite common, more so, however, in females than males. The disease is as frequently inherited as acquired. The lesion is most often at the apex, and generally involves both lungs. Cavities are found, and the changes are phthisical in so far that there exists progressive consolidation, followed by softening and the formation of cavities. The ultimate results of a case depend a great deal upon early recognition, before grave organic lesions have occurred.

There is reason, as I have said, to believe that the strumous diathesis renders the development of syphilitic phthisis, through direct or inherited infection, more likely to be determined. There is equal reason for the supposition that the occurrence of this latter will intensify the strumous taint—or at least evidence is as yet lacking that such is not the case. In whatever deduction this may be at last determined, my own deductions will still prove true, namely:

1. That the more completely we prevent (by wise sanitation), control (by intelligent supervision), and perhaps cure (in certain cases by specific treatment), phthisis and other forms of strumous disease, to such an extent do we limit the probable infectious propagation and intensity of syphilis.
2. Similarly, the more actively we endeavor, by public and private measures other than those now indicated, to absolutely eradicate syphilis from any community, to such an extent do we limit the occurrence, personal and by inheritance, of the various forms of strumous disease.

3. *A fortiori*, and even to a greater extent than has as yet been or can be effected by governmental or private attempts to control venereal disease by examining for or treating its primary lesions, by thus removing from our midst a large moiety of the material upon which the disease has thus far subsisted, we may hope eventually to get it under control.

What I have now said, and the many practical thoughts to which it cannot fail to give rise in your minds, will be considered, I trust, to suffice for the present occasion. Brevity is universally conceded to be the soul of wit. I shall have done my duty if without tiring you, I have indicated a direction in which, whenever occasion may permit, you may conscientiously throw your whole influence towards aiding the suppression of the fearful malady which pervades the community under the least suspected

guises, and in quarters where its existence would never for a moment be imagined.

My task completed, I have to wish health, long life and happiness to you all, and many future pleasant reunions, perhaps some day even once more in California.

ORIGINAL ARTICLES.

#132

MEDICAL WORK AMONG THE SIOUX INDIANS.

Read before the Dearborn County (Indiana) Medical Society, September 25, 1887.

BY FREDERICK TREON, M.D.,
PHYSICIAN TO CROW CREEK AGENCY.

I desire to give a brief outline of my work and experience among the Indians during the past year, hoping it may prove of interest to the profession, and that I may get suggestions that will aid me in the future.

The Indian, from constant exposure to the severe cold and extreme heat of Dakota, is liable to many diseases, often sleeping, when the mercury registers 40° below zero, on the cold ground with only a thin tipi for shelter and a dirty blanket to wrap up in; while during the summer, when the temperature reaches the extreme height of 120° F. in the shade, he exists upon the commonest food, often gorging himself with the native buffalo berries, plums, and choke cherries, and drinking the vilest water imaginable.

Consumption and Scrofula.—The first diseases to which my attention was directed, when I reached the Agency, were consumption and scrofula. Out of all the cases treated 87 have been of consumption and 30 of scrofula. Out of 57 deaths, 40 were from consumption, 4 from scrofula, and only 9 from other diseases, while 4 were accidental. Thus it will be seen that about 7 out of every 10 are dying from consumption. In my experience it has been the exception to find among the Crow Creek Indians—who are of the great Sioux tribe, and known as the Yanktonia Sioux—a good healthy subject. I find, basing my belief on the death-rate for the past year, that in less than another century this particular band of Indians will be extinct, and so far as they are concerned the great Indian problem will have been solved.

Consumption among these people appears, in the adults, always to follow an acute attack of bronchitis or catarrhal pneumonia; while usually the first symptom to which your attention is called in the child is a looseness of the bowels amounting at times to dysentery. The child grows weak, becomes emaciated, and often refuses food, while at other times it possesses a most ravenous appetite. At first the mesentery alone appears to be affected, but later on a cough sets in, dulness on percussion is perceptible over one and sometimes over both lungs, at the apex and not infrequently at the base. Mucous and crepitant râles are distinctly heard. Expectoration of a tough mucous character, and often frequent and copious hæmorrhages are present. I have yet to find a case in which there was any evidence or history of

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rigors. I have never seen them have a chill. The symptoms I have described are not always present. The patient sinks rapidly and dies from asthenia. While the Indian is a patient sufferer, and possesses unlimited courage and fortitude, yet he dies very suddenly and when you least expect it.

I have noticed that patients that have enlarged glands and scrofulous sores do not, as a rule, have phthisis pulmonalis. I do not consider my experience sufficient to warrant me in saying this will not happen, but my observation for the year supports the assertion.

Syphilis and Gonorrhœa.—That these people are inoculated with some specific poison one cannot question, a disease that is hereditary and may have had its origin in syphilis; and yet I have my first case of an acute attack of that disease or of gonorrhœa to see among them—a most noteworthy fact.

Pneumonia.—During the spring of the year these people have a great deal of pneumonia and the mortality is heavy. It is not an uncommon thing to see the women, when winter is breaking, sitting in the water or rolling in the melting snow.

Eye Diseases.—Conjunctivitis appears among the Indians in the spring and autumn in an epidemic form, and often of a violent type, not infrequently terminating in ulceration and opacity of the cornea.

I have had as many as 50 cases under treatment at one time. From the tainted condition of their blood the disease is often obstinate and difficult to manage. I have a case under treatment now, in which a girl, Maggie Moccasin, was sent home from the Wabash School, in Indiana, as incurable and hopelessly blind. The child aroused my sympathy from the fact that she was, aside from being a very bright child, able to speak very good English. I found her in a miserable, dirty hut, unable to cross the floor unless led. I tried to get her into the school so that I could treat her, and to this I obtained the Agent's consent, but there were were a great many objections to this and the idea had to be abandoned. At last I found a helper in the Rev. Mr. Burt, the Episcopal missionary, who, with his good wife, took her into their home and provided the child with every comfort and attention possible. She had complete opacity, with slight staphyloma of the left eye, while the right eye had almost a complete opacity; yet there was no bulging of the cornea. At first I thought I should perform iridectomy and make an artificial pupil for the left eye, but concluded to try treating the eyes, first with a 4 per cent. solution of atropia, and later with the yellow oxide of mercury ointment, giving her at the same time full doses of the syrup of iodide of iron. I can say that the results from the long and patient use of these remedies have been most gratifying; not only has the right eye cleared up, but the left has also been very much relieved and greatly improved. The child now sees to thread a needle and is beginning to read.

From the long severe winters I have seen a great many frost bites. I have seen any number of them with their cheeks frosted, and have treated a great many cases of frozen feet and hands.

Ulcerous Affections.—I next desire to mention a

very peculiar and annoying ulcer that is very common among these people, and that I have never seen anywhere else. The first symptom is a severe pain, usually located upon the extremities; a circumscribed pain over a spot not larger than a nickel. This lasts for about forty-eight hours, when you can feel very distinctly a small hard substance like a shot, deep down in the tissues, very similar to that found in small-pox. About the third day there is a slight flush on the surface, then a small blister appears, which is always superficial; on the second or third day after the blister appears it breaks down, and a number of others appear in the same locality. A thin sanguineous fluid is discharged, and the blisters consolidate and form one large but superficial ulcer. After a few days resolution commences, healing over without leaving a cicatrix. One person may have these for a long time; when one crop heals, another appears. I have met with the best results in the treatment of this trouble by using an ointment made of the oil of cod, with an alterative given internally.

Schools.—The schools of Crow Creek and Winnebago Reservations are now in full operation, with good sanitary surroundings. We have a boarding-school at the Agency, a Catholic Mission 18 miles northwest, just completed at a cost of \$20,000, and Miss Grace Howard's Mission, now nearing completion, is located twelve miles southeast from the Agency. This school is under the Episcopal Church, but erected by Miss Howard. It will be for returned Hampton pupils. These schools will accommodate about 400 children. The Indian child does not learn so rapidly, as a rule, as does the white child, but surely a good work is being accomplished; a work that will tend more to civilize these roaming, restless people in the future than any other one thing. My work in the schools has been the most successful; there the patients are directly under the care of the whites, and directions are carried out to the letter, but it is in the schools that I have found diseases in their epidemic forms.

Surgery.—I have not found a great deal of surgery to do, but desire to mention one or two cases that have interested me: One was a case in which a young Indian driving a reaper stopped to fasten up the trace of his inside pony. He neglected to throw his machine out of gear and, the flies being bad, the ponies started; he was caught in the sickle and his right leg nearly severed at the junction of the lower and the middle third; the fibula and tibia were both badly cut and mangled. At first I thought that nothing short of an amputation would save him, but concluded to be conservative and make an effort to save the limb. I had to treat him in a tipi on a bed made on the ground; this, however, was not a disadvantage, as it afforded him good hygiene. I made for him a rather ingenious arrangement in the shape of a camp-stool for the limb to rest in. This allowed of a free circulation of air under the injured member, gave excellent drainage, and at the same time made an admirable cushion. I used simply a wash of carbolic acid, and kept the limb in good position by means of side splints. I visited him often to see that the wound was kept clean and to look after his

condition generally. I removed a number of small spiculæ of bone, but the wound healed kindly and bony union took place by a provisional callus. After nine weeks of confinement I put on a brace and have him on crutches. I predict for him a fair limb and I am gratified with the results.

Malignant Disease.—I have met with but one malignant or cancerous tumor, and that was in a half-breed at Lower Brulé. He was under the charge of Dr. J. B. Graham, the Agency physician at that post. The disease was located upon the right shoulder and neck. We operated upon the patient a few weeks ago. The doctor first destroyed what he could of the growth with chloride of zinc and other caustics. We placed him under the influence of an anæsthetic, using the A. C. E. mixture, after which we cut away all we could with scissors. Then we scraped out the extensions with a sharp curette, after which we used the thermo-cautery at a white heat, cauterizing the entire surface. After this Dr. Graham used a dressing of chloride and oxide of zinc. I am informed that the wound has healed very kindly, and the patient is very much improved in general health.

Skin Diseases.—The Indian has a very delicate skin, with a very smooth surface and soft texture, which, from a lack of cleanliness, with their tainted condition, renders them highly susceptible to skin diseases. Itch is very common, and eczema, herpes and ichthyosis are often found among them. Shortly after I arrived at the Agency I was called to see "Skunk Robe," an Indian who was suffering with ichthyosis. I found him in a tipi in the grove near by. He told me he had been afflicted for some time. He was covered in places with scales, localized on the lower extremities and breast. He was quite old and a very devout Christian. I gave him internally cod-liver oil and, contrary to the advice of some authors, Fowler's solution. Locally I had him use a tar ointment and instructed him to keep clean and quiet. He went to his home on Crow Creek, about seventeen miles from the Agency, to which I frequently drove to see him. On my first visit to his home I found the disease very greatly aggravated and every imaginable space on his body covered with a dry, harsh, non-perspiratory, scaly, ill-nourished skin, showing the dark peculiar caking upon it so diagnostic of his trouble. Even the soles of his feet, as well as the crown of his head, were a mass of huge scales. I found him in a miserable old hut, dirty and illy ventilated, lying upon a cot too utterly dirty and filthy to describe. I learned that he had been in the habit of going out naked and rolling and bathing in the cold snow. To me the case was a most remarkable and interesting one, and I made that long drive a number of times to see him. I believe that if I could have succeeded in tiding him over until spring I might have, with the aid of a well ventilated tipi and the pure fresh air, at least afforded him some relief; but a new complication, in the nature of an acute attack of bronchitis, set in, due, no doubt, to the snow bath, and he died. I have to regret that I could not have brought him, with so rare a disease in such an aggravated form, before you, for you will doubtless

never see one so bad as this. He reminded one more of a large fish than of a human being.

Parasites.—These people are constantly loaded with lice, both head and body. I have not infrequently seen the women "lousing" one another and eating the vermin. Once I saw a group of dirty squaws sitting on the ground and, as there were not enough to supply all, a shaggy dog was being gone over by one of them. As they eat a great deal of raw meat they have enormous tapeworms, as well as lumbricoids and ascarides.

Medicine Men.—These Indians, to an extent, still retain their native "medicine men," who are the most remarkable frauds imaginable. They treat their patients by "pow-wowing" and drumming over them and singing or chanting a most dismal song, which is a deep guttural sound and hideous in the extreme. Sometimes, however, they do administer remedies. I remember a case of conjunctivitis that fell into the hands of a "medicine man," who treated the eye by putting brass filings into it. You can easily guess the results. I have been told one of the ways by which they gain their knowledge and become "medicine men." They go on the hill-tops, and in the extreme heat lie with their faces to the ground for days, and refuse food or drink, until from exhaustion they become delirious; then it is, they claim, that a spirit comes to them in the shape of a wild animal, or sometimes it is a weed that speaks to them and sings them a song, telling them that the song will drive out certain diseases, or a certain herb will cure when administered by him. Then the man gets up and, with a drum, is a full-fledged doctor. You can always tell when they are at work, for they run up a medicine flag, red or yellow, which is to communicate with the Great Spirit, the sun or the moon, and is the fulfilling of a promise made by the "doctor" to the Great Spirit, for which he is to receive in return the restoration of the patient. The Indian believes that all diseases are the result of certain power delegated only to the medicine man. They think that consumption is produced by blowing into the system a seed of grass, and that he alone has power to heal them. They attribute headache to an evil spirit, and nothing but the drum and "pow-wow" will drive the spirit away. They believe, however, that a boil is the result of a silent shot from a duck, while a carbuncle is from the shot of a goose. When one of them gets very sick they have a medicine feast, and make medicine over the patient. I once attended a feast of this kind. The soup is made of dog; which, by the way, is considered a great luxury. They all eat while the "medicine man" beats a drum and sings or chants a most fearful and dismal ode, which is kept up for hours or until the soup is exhausted.

The Indians, as you may well suppose, are very superstitious, and if they can avoid it they never allow the patient to die in the house or tipi. If this happens they tear down the house, and never live in it again, no matter how good it is. I recall three instances in which this happened. They usually bury their dead in the ground, though some of them are placed on poles or in the trees, while others are set on the hills. Where a coffin is used they come for

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A very amusing incident occurred at the Agency some time ago. A squaw made complaint against her liege lord—who, by the way, was a "medicine man," and said he was not providing for her. He made a bold speech in his own defense, in which he said, with great pomposity: "I am better than other men; why? Because I am a doctor. I have ponies and cattle; why? Because I am a doctor. My body is worth gold; why? Because I am a doctor."

Not long since one of these medicine men called on me to prescribe for his son for retention of urine. I did so, and the boy soon recovered. I was not aware at the time that the fellow was a "medicine man," but one day he came to me and said: "My friend, my heart is very good; your medicine is good; my boy is well." I said, "How?" He then laid his hand on my arm and said he was a doctor and that I was a doctor, and we should be friends. He then shook my hand and went away.

But notwithstanding these people to some extent retain their medicine men, yet they appear to be progressing, and many of them have come to know that the white man's medicine is far superior to the mystifying, conjuring pow-wow of the Indian; and they are fast learning that the Indian doctor is a fraud. I am indeed encouraged and gratified with my work and the results. One very annoying thing, however, is that they have no idea of our plan of reckoning time, and medicine can only be given at intervals of about six hours, or three times a day, so that the physician must be exceedingly careful in what doses he prescribes and what he gives, for the Indian is liable to drink the contents of a bottle at one time.

But these people are surely progressing. When we stop to consider that only a dozen years ago they were a wild, savage race, huddled together in one large band, living in tipis along the Missouri, without an Indian house on the Reservation, and all in blankets, and that to-day nearly every one of them have their lands in allotment and are living in good comfortable houses, while many of them are clothed in citizens' dress, and are farming and getting for themselves herds of cattle and horses, we can but say that they have made a marvelous and rapid advance towards civilization; and I predict that the day is not far distant when they will be self-sustaining. With the aid of the efficient force of employes and the energetic missionaries at work, we hope for great achievements in the future.

Summary.—Cases treated in all, 790; patients visited in homes, 97; in tipis, 100. I have traveled to see sick on horseback 94 miles; have walked 97 miles; have traveled in spring wagon 1,170 miles. Births during the year, 55; deaths, 57.

September 25, 1887.

THE BURIAL REFORM ASSOCIATION of England is an organization that advocates early interment, and the use of perishable coffins to permit rapid disintegration after burial in the earth.

THE USE OF WATER IN THE TREATMENT OF RENAL AND HEPATIC DISEASES.

Read before the Northwestern Medical Society, January 10, 1888.

BY E. F. ELDRIDGE, M.D.,

OF NEW LONDON, WIS.

For the past five or six years I have been much interested in the cause, pathology and treatment of the various morbid conditions of the kidneys, more particularly in that departure from the normal that is quite frequently met with in this country, especially among business and professional men, which is the direct result of the ingestion of too great quantities of carbo-hydrates in the form of fat, sugar or starch, over-stimulation of the nervous system with alcoholic beverages, the immoderate use of tobacco, excessive mental activity, worry, lack of sleep, dissipation, etc. The frequency with which our attention is called to this condition and the subsequent history of these cases, if left to themselves, is such that it should excite our deepest sympathy, and receive our most earnest attention.

In these cases irritation and congestion (which finally become chronic) of the kidney are induced by the continued excretion of uric acid, the results of imperfect digestion or oxidation of albuminoids, the straining off of large quantities of partly converted starch in the form of sugar, or of an excessive amount of the different combinations of the phosphates from the destruction of nerve tissue. Tobacco and alcohol produce the same results; the former by paralyzing the coats of the arteries, and the latter by increasing the heart's action and raising the blood pressure. The result of either is to dilate the capillaries to twice their original calibre, and produce a condition of static congestion and functional incapacity. If this condition is allowed to continue, organic lesion is the result, and either diabetes mellitus or Bright's disease is the sequela.

In prescribing for these patients it is necessary to ascertain which of the above causes is the active one in the particular case under consideration, and remove it if possible; if not, as is often the case with worry, overwork, etc., to modify its influence by the aid of proper food, hygienic surroundings and suitable remedies, so as to reduce its injurious effects to a minimum.

The great struggle going on at the present day among professional and business men for the leading position in their respective callings is the result of a firm belief in the doctrine "that the survival of the fittest is the inevitable." In regard to health and life this is not true, and should be so understood by patients suffering from any of these maladies. Errors of diet and deportment must, of course, be corrected.

The second consideration is that of the removal of the waste material, or of getting rid of the "accumulated surplus" with which the system is loaded, and which is continually undergoing a retrograde metamorphosis, the result of which is the production of highly poisonous irritants in the form of uric acid, etc. In no way can this be accomplished (so far as I know) as rapidly as by solution or hydration; in